Reducing Aviation's Climate Impact with a Global Market-Based Measure (MBM)

Summary

- The global aviation industry's CO_2 mitigation goals include carbon neutral growth from 2020 and a 50% cut in net CO_2 emissions by 2050 compared to 2005 levels.

- The aviation industry continues to make significant reductions in its carbon intensity through technology, operations and infrastructure improvements. Specifically for the UK, the Sustainable Aviation CO_2 Road-Map shows that UK aviation is able to accommodate significant growth to 2050 without a substantial increase in absolute CO_2 emissions.

- However a global market-based measure (MBM) will be necessary to achieve the aviation industry's global CO_2 goals and the industry has strongly encouraged the development of a single, global MBM for this purpose.

- This MBM should be in the form of a global carbon offsetting mechanism developed in line with a number of guiding principles including environmental integrity, cost-efficiency, administrative simplicity, transparency, and the avoidance of duplication and competitive distortion.

- The International Civil Aviation Organisation (ICAO) is developing an MBM solution to be agreed by the next Assembly in 2016, and capable of being implemented globally from 2020.

Background

CO_2 emitted by aircraft, resulting from the combustion of fuel, accounts for around 2% of humanity's total CO_2 emissions. The aviation industry has always sought to reduce the amount of fuel it uses, as fuel is typically the largest single cost for airlines. In 2008 the whole industry signed an agreement on the way forward for reducing emissions. This declaration was followed by a set of comprehensive targets, the first for any industry:

- Improve fuel efficiency by 1.5% per year from 2009 to 2020
- Achieve carbon neutral growth in net aviation CO_2 emissions from 2020
- Reduce aviation's net CO_2 emissions by 50% by 2050, relative to 2005 levels.

The industry has been making progress through the pursuit of a four-pillar approach:

1) Technology innovation, including more fuel efficient aircraft and sustainable aviation fuels;
2) Operational improvements including weight reduction and air traffic control techniques;
3) Infrastructure efficiencies like reformed air traffic management systems; and
4) Economic measures such as a global MBM.

In Sustainable Aviation's CO_2 Road-Map, we conclude that UK aviation is able to accommodate significant growth to 2050 without a substantial increase in absolute CO_2 emissions. Technology, operations, infrastructure improvements and sustainable fuels can deliver this outcome, but to meet the net CO_2 goals an MBM is needed.

The European governing institutions included aviation in the European Union Emissions Trading System (EU ETS) from 2012. This legislation originally covered all flights from, to and within the European Economic Area (EEA) and applied to EU and non-EU airlines. However, to allow time for negotiations on a global MBM to take place, a 'stop-the-clock' provision was made so that only flights operated within the EEA are covered by the

EU ETS until the end of 2016. If, by 2016, insufficient progress has been made towards a global MBM, to begin in 2020, the EU could 'snap back' to the original EU ETS in 2017. If sufficient progress is made, then we believe aviation's inclusion within the EU ETS will no longer be required from 2020 onwards when the global MBM will enter into force.

In our CO_2 Road-Map, published in 2012, the assumed trajectory of net CO_2 emissions from UK aviation reflects the emissions cap associated with the incorporation of aviation in the EU ETS from 2012-2020, corresponding to 95% of CO_2 emissions from UK aviation in 2005. From 2020 onwards Sustainable Aviation assumed a gradual linear reduction in net CO_2 emissions, reaching 50% of 2005 levels by 2050. The exact trajectory of this reduction remains to be determined once the global MBM solution is agreed by ICAO.

Guiding principles

Aviation needs an ambitious policy that supports both mitigating the environmental impact and promoting the sustainable growth of an essential industry. A well-designed global MBM for aviation is essential to avoid a patchwork of un-coordinated and ineffective national and regional policies. The MBM should:

- Be global, rather than regional, to avoid market distortions and carbon leakage;
- Account for emissions only once and ensure passengers do not face multiple layers of taxation;
- Be used to encourage the research, development and deployment of new technologies as well as industry investment;
- Be simple, cost-effective and transparent.

Regulators and policymakers can support these aims by

1. Continuing to support negotiations towards a global MBM for aviation
2. Ensuring that aviation emissions are removed from scope of the EUETS once the global MBM enters force
3. Avoiding implementing local taxes and charges which can result in competitive distortions.

Current status

Governments meeting at ICAO are currently considering a single global **carbon offsetting mechanism**. Carbon offsetting is the process of purchasing good quality carbon credits in the global market and using them to offset the carbon emitted. Carbon offsetting delivers finance to renewable energy, forestry or resource conservation projects which generate reductions in greenhouse gas emissions. Many projects also deliver added benefits to local communities and the environment, such as job creation, health and wellbeing improvements and protection of biodiversity.

Carbon offsetting follows the principles of carbon trading and can be applied more flexibly than emissions trading. To work efficiently, emissions trading requires participation of a wide range of industry sectors with a range of emission abatement costs. In the absence of other industry sectors to trade with at the international level, carbon offsetting offers an effective and achievable solution. An offsetting scheme also does not require complex infrastructure and regulations to issue, distribute, and manage allowance auctions and disburse related proceeds. We therefore believe this option will be relatively easy to administer, cost-efficient and has a good chance of being agreed and implemented by 2020.

ICAO has almost 200 Member States which creates challenges when reaching agreement. The timeframe is also challenging. However, the industry remains confident that, given the willingness of States to engage, a positive solution can be reached. This would be the first global agreement on dealing with emissions from a single sector. This briefing paper will be updated as clarity emerges later in 2016 from ICAO discussions.